AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Previously Presented) A method of detecting switching subnodes in a monoblock wavelength division multiplex optical switching node, each subnode corresponding to a given level of granularity and to a given switching function, wherein the method comprises the following steps:

(a) collecting information concerning how traffic is crossing an initial monoblock switching node;

(b) defining the granularity and switching function of the subnodes to be detected;

(c) considering each subnode successively in an order corresponding to reducing switching constraints; and

(d) for each subnode, selecting all or part of the traffic of an incoming granularity and an outgoing granularity that satisfy the switching constraints of the subnode concerned.

2. (Original) The method claimed in claim 1 wherein said information collected in step (a) is information contained in the initial switching matrix of the monoblock node whose subnodes are to be detected.

3. (Previously Presented) The method claimed in claim 1, wherein step (b) detects successively:

(b1) the fiber level optical switching subnode;

(b2) the band level optical switching network with a direct routing function, without band translation;

(b3) the band level optical switching subnode with subband translation;

(b4) the subband level optical switching subnode with a direct routing function, without subband translation;

(b5) the subband level optical switching subnode with subband translation;

(b6) the wavelength level optical switching subnode with a direct routing function, without wavelength translation; and

(b7) the wavelength level optical switching subnode with wavelength translation.

4. (Previously Presented) The method claimed in claim 3, wherein the method further comprises detecting:

(b8) the subnode corresponding to an insert/extract multiplexer with a direct routing function without wavelength translation; and

(b9) the subnode corresponding to an insert/extract multiplexer with wavelength translation.

5. (Previously Presented) The method claimed in claim 1, wherein step (d) comprises the following substeps:

(d1) marking all of the traffic of the incoming granularity as coming from the subnode concerned and all the traffic of the outgoing granularity as going to the subnode concerned;

(d2) marking the traffic that satisfies the switching constraints of the subnode concerned as belonging to that subnode; and

(d3) increasing the number of ports of the subnode concerned.

6. (Previously Presented) The method claimed in claim 3 wherein steps (b2), (b4), (b6) and (b8) use a ricochet function for verifying the link with a conversion on any incoming granularity that may be switched in a routing subnode to prevent all internal traffic between subnodes having the same level of granularity.

7. (Previously Presented) The method claimed in claim 6, wherein the ricochet function for verifying the link with a conversion comprises the following looped steps:

(i) verifying that none of the wavelengths of the incoming granularity is linked with a translation;

(j) verifying that none of the wavelengths of the outgoing granularity or granularities corresponding to the incoming granularity is linked with a translation;

(k) marking the wavelengths verified to prevent looping; and

(l) for each outgoing granularity, applying the function for verifying the link with a conversion again to all of the wavelengths constituting the incoming granularity of the wavelengths constituting the outgoing granularity.

Please add the following new claims:

8. (New) A method of detecting switching subnodes in a monoblock wavelength division multiplex optical switching node, each subnode corresponding to a given level of granularity and to a given switching function, wherein the method comprises the following steps:

(a) collecting information concerning how traffic is crossing an initial monoblock switching node;

(b) defining the granularity and switching function of the subnodes to be detected, wherein the step detects successively:

(b1) the fiber level optical switching subnode;

(b2) the band level optical switching network with a direct routing function without band translation;

(b3) the band level optical switching subnode with subband translation;

(b4) the subband level optical switching subnode with a direct routing function without subband translation;

(b5) the subband level optical switching subnode with subband translation;

(b6) the wavelength level optical switching subnode with a direct routing function without wavelength translation; and

(b7) the wavelength level optical switching subnode with wavelength translation;

(c) considering each subnode successively in an order corresponding to reducing switching constraints; and

(d) for each subnode, selecting all or part of the traffic of an incoming granularity and an outgoing granularity that satisfy the switching constraints of the subnode concerned.

9. (New) The method claimed in claim 8 wherein said information collected in step (a) is information contained in the initial switching matrix of the monoblock node whose subnodes are to be detected.

10. (New) The method claimed in claim 8, wherein the method further comprises detecting:

(b8) the subnode corresponding to an insert/extract multiplexer with a direct routing function without wavelength translation; and

(b9) the subnode corresponding to an insert/extract multiplexer with wavelength translation.

11. (New) The method claimed in claim 8, wherein step (d) comprises the following substeps:

(d1) marking all of the traffic of the incoming granularity as coming from the subnode concerned and all the traffic of the outgoing granularity as going to the subnode concerned;

(d2) marking the traffic that satisfies the switching constraints of the subnode concerned as belonging to that subnode; and

(d3) increasing the number of ports of the subnode concerned.

12. (New) The method claimed in claim 8 wherein steps (b2), (b4), (b6) and (b8) use a ricochet function for verifying the link with a conversion on any incoming granularity that may be switched in a routing subnode to prevent all internal traffic between subnodes having the same level of granularity.

13. (New) The method claimed in claim 12, wherein the ricochet function for verifying the link with a conversion comprises the following looped steps:

(i) verifying that none of the wavelengths of the incoming granularity is linked with a translation;

(j) verifying that none of the wavelengths of the outgoing granularity or granularities corresponding to the incoming granularity is linked with a translation;

(k) marking the wavelengths verified to prevent looping; and

(l) for each outgoing granularity, applying the function for verifying the link with a conversion again to all of the wavelengths constituting the incoming granularity of the wavelengths constituting the outgoing granularity.

14. (New) The method claimed in claim 1, wherein some of said subnodes are associated with a switching function which involves frequency translation, and others of said subnodes are associated with a switching function that involves switching without frequency translation.

15. (New) The method claimed in claim 1, wherein said switching constraints are independent of capacity of a switching path.

16. (New) The method claimed in claim 1, wherein said switching constraints include a constraint that no internal traffic can be generated between subnodes that have the same level of granularity.

17. (New) The method claimed in claim 1 wherein said switching constraints include the constraint that for a given subnode, the method cannot switch one portion of the multiplex with wavelength translation and another portion of the same multiplex without wavelength translation.

18. (New) The method claimed in claim 1, wherein said step of defining the granularity and the switching function of the subnodes to be detected comprises successively detecting:

(b1) the fiber level optical switching subnode;

(b2) the band level optical switching network with a direct routing function, without band translation;

(b3) the band level optical switching subnode with subband translation;

(b4) the wavelength level optical switching subnode with a direct routing function, without wavelength translation; and

(b5) the wavelength level optical switching subnode with wavelength translation.

19. (New) The method claimed in claim 18, wherein said defining step further comprises, between steps (b3) and (b4):

(b5) the subband level optical switching subnode with a direct routing function, without subband translation;

(b6) the subband level optical switching subnode with subband translation;